

## CLAIMS

### WHAT IS CLAIMED:

*Sub A1 5*

1. A method, comprising:  
receiving a virtual address;  
comparing at least a portion of the virtual address to a first preselected range;  
using a first mechanism to generate a first physical address from the virtual address in response to the virtual address being outside the first preselected range; and  
using a second mechanism to generate a second physical address from the virtual address in response to the virtual address being within the first preselected range.

2. The method set forth in claim 1 wherein using the first mechanism to generate the first physical address from the virtual address in response to the virtual address being outside the first preselected range further comprises using a paging mechanism to generate the first physical address from the virtual address in response to the virtual address being outside the first preselected range.

3. The method set forth in claim 2 wherein using the second mechanism to generate the second physical address from the virtual address in response to the virtual address being within the first preselected range further comprises using a hard mapped mechanism to generate the second physical address from the virtual address in response to the virtual address being within the first preselected range.

20 4. The method set forth in claim 3 further comprising storing an entry for a page table in the second physical address, wherein the page table entry may be used by the paging mechanism to generate the first physical address from the virtual address.

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*A1*

5. The method set forth in claim 3 further comprising storing at least one value representative of the second physical address during an initialization period, wherein the second mechanism uses the at least one value to generate the second physical address.

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6. The method set forth in claim 5 wherein storing the at least one value representative of the second physical address during the initialization period further comprises storing the at least one value representative of the second physical address during only the initialization period.

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7. The method set forth in claim 5 wherein storing the at least one value representative of the second physical address during the initialization period further comprises using secure kernel software to store the at least one value representative of the second physical address during the initialization period.

8. The method of claim 1, further comprising storing at least one value representative of the first preselected range during an initialization period.

9. The method of claim 8, wherein storing the at least one value representative of 20 the first preselected range during the initialization period further comprises storing the at least one value representative of the first preselected range during only the initialization period.

10. The method of claim 8, wherein storing the at least one value representative of the first preselected range during the initialization period further comprises using secure

kernel software to store the at least one value representative of the first preselected range during the initialization period.

A) 11. An apparatus, comprising:

5 means for receiving a virtual address;

means for comparing at least a portion of the virtual address to a first preselected range;

means for using a first mechanism to generate a first physical address from the virtual address in response to the virtual address being outside the first preselected range; and

10 means for using a second mechanism to generate a second physical address from the virtual address in response to the virtual address being within the first preselected range.

15 12. An apparatus for converting a virtual address to a physical address, comprising:

a comparator adapted to receive the virtual address and deliver a first signal indicating that the virtual address is outside a first preselected range, and a second signal indicating that the virtual address is within the first preselected range;

20 a first mechanism adapted to produce a first physical address from the virtual address in response to receiving the first signal; and

a second mechanism adapted to produce a second physical address from the virtual address in response to receiving the second signal.

25 13. The apparatus set forth in claim 12 wherein the first mechanism is a paging mechanism.

14. ~~The apparatus set forth in claim 12 wherein the second mechanism is a hard mapped mechanism.~~

15. The apparatus set forth in claim 12 further comprising a secure kernel software program adapted to store at least one value representative of the second physical address during an initialization period, wherein the second mechanism uses the at least one value to generate the second physical address.

16. The method set forth in claim 15 wherein the secure kernel software stores the at least one value representative of the second physical address during only the initialization period.

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